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L Number	Hits	Search Text	DB	Time stamp
1	34962	mr or mre or magneto adj resist\$5 or magnetoresist\$5 or amr or magnetic\$4 adj	EPO; JPO; DERWENT	2003/05/21 10:43
		resist\$5 or gmr\$1 or spin adj valve\$1 or svmr\$1 or tjmr\$1 or tmj\$1 or		
		g11b005/39.ipc. or tmr or mram or magnetic		
		adj memory or magnetic adj random adj		
		access adj memory or TJM or macro adj magnetoresist\$5 or macromagnetoresist\$5		
2	65990	tunnel\$3 or cpp or c-p-p or c adj p adj p or	EPO; JPO;	2003/05/21
_		current near3 perpendicular\$2	DERWENT	10:44
3	1111	(mr or mre or magneto adj resist\$5 or	EPO; JPO;	2003/05/21
		magnetoresist\$5 or amr or magnetic\$4 adj resist\$5 or gmr\$1 or spin adj valve\$1 or	DERWENT	09:44
		svmr\$1 or tjmr\$1 or tmj\$1 or		
		g11b005/39.ipc. or tmr or mram or magnetic		
		adj memory or magnetic adj random adj		
		access adj memory or TJM or macro adj		
		magnetoresist\$5 or macromagnetoresist\$5)		
		and (tunnel\$3 or cpp or c-p-p or c adj p adj p or current near3 perpendicular\$2)		
4	1187436	vertical or bias\$3 or permanent or	EPO; JPO;	2003/05/21
		barkhausen or mdc or magnetic adj2	DERWENT	09:47
		domain\$1 or magnetization or magnet or		
		magnets or barkhaussen		
5	375	((mr or mre or magneto adj resist\$5 or	EPO; JPO;	2003/05/21
	į	magnetoresist\$5 or amr or magnetic\$4 adj resist\$5 or gmr\$1 or spin adj valve\$1 or	DERWENT	09:47
		svmr\$1 or tjmr\$1 or tmj\$1 or		
		g11b005/39.ipc. or tmr or mram or magnetic		
		adj memory or magnetic adj random adj		
		access adj memory or TJM or macro adj		
		magnetoresist\$5 or macromagnetoresist\$5)		
		and (tunnel\$3 or cpp or c-p-p or c adj p adj p or current near3 perpendicular\$2)) and		
		(vertical or bias\$3 or permanent or		
		barkhausen or mdc or magnetic adj2		
		domain\$1 or magnetization or magnet or		
		magnets or barkhaussen)		
6	269200	(magnet or magnets or barkhausen or ((hard	EPO; JPO;	2003/05/21
•		or longitudinal\$4) adj2 bias\$4) or mdc or	DERWENT	09:48
		domain\$ or barkhaussen or popcorn or pop adj corn or wiggle)		
7	1228526	(vertical or bias\$3 or permanent or	EPO; JPO;	2003/05/21
		barkhausen or mdc or magnetic adj2	DERWENT	09:48
		domain\$1 or magnetization or magnet or		
		magnets or barkhaussen) or ((magnet or		
		magnets or barkhausen or ((hard or		
		longitudinal\$4) adj2 blas\$4) or mdc or domain\$ or barkhaussen or popcorn or pop		
		adj corn or wiggle))		

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8	379	((mr or mre or magneto adj resist\$5 or	EPO; JPO;	2003/05/21
		magnetoresist\$5 or amr or magnetic\$4 adj	DERWENT	09:48
		resist\$5 or gmr\$1 or spin adj valve\$1 or		
		svmr\$1 or tjmr\$1 or tmj\$1 or		
		g11b005/39.lpc. or tmr or mram or magnetic		
		adj memory or magnetic adj random adj		
		access adj memory or TJM or macro adj		
1		magnetoresist\$5 or macromagnetoresist\$5)		
Ì		and (tunnel\$3 or cpp or c-p-p or c adj p adj		
		p or current near3 perpendicular\$2)) and		
		((vertical or bias\$3 or permanent or		
		barkhausen or mdc or magnetic adj2		
		domain\$1 or magnetization or magnet or		
		magnets or barkhaussen) or ((magnet or		
		magnets or barkhausen or ((hard or		
		longitudinal\$4) adj2 bias\$4) or mdc or		
		domain\$ or barkhaussen or popcorn or pop		
		adj corn or wiggle)))		
9	741	mr or mre or magneto adj resist\$5 or	IBM_TDB	2003/05/21
-		magnetoresist\$5 or amr or magnetic\$4 adj		10:43
		resist\$5 or gmr\$1 or spin adj valve\$1 or		10.40
		svmr\$1 or tjmr\$1 or tmj\$1 or	ŀ	
		g11b005/39.lpc. or tmr or mram or magnetic		
		adj memory or magnetic adj random adj		
		access adj memory or TJM or macro adj		
		magnetoresist\$5 or macromagnetoresist\$5		
10	2209	tunnel\$3 or cpp or c-p-p or c adj p adj p or	IBM_TDB	2003/05/21
		current near3 perpendicular\$2 or barrier	IDW_IDB	10:44
11	36	(mr or mre or magneto adj resist\$5 or	IBM_TDB	2003/05/21
		magnetoresist\$5 or amr or magnetic\$4 adj	IBW_IBB	10:45
		resist\$5 or gmr\$1 or spin adj valve\$1 or		10:45
		svmr\$1 or tjmr\$1 or tmj\$1 or		
		g11b005/39.ipc. or tmr or mram or magnetic		
		adj memory or magnetic adj random adj		
		access adj memory or TJM or macro adj		
		magnetoresist\$5 or macromagnetoresist\$5)		
		and (tunnel\$3 or cpp or c-p-p or c adj p adj		
		p or current near3 perpendicular\$2 or		
		p or current nears perpendiculars2 or barrier)		
12	1334	•	EDG. ISS	2002/05/04
12	1334	(seed or buffer or underlayer or under adj	EPO; JPO;	2003/05/21
13	23	layer or seedlayer) near4 free	DERWENT	10:46
13	23	(mr or mre or magneto adj resist\$5 or	EPO; JPO;	2003/05/21
		magnetoresist\$5 or amr or magnetic\$4 adj	DERWENT	10:46
		resist\$5 or gmr\$1 or spin adj valve\$1 or		
		svmr\$1 or tjmr\$1 or tmj\$1 or		
		g11b005/39.lpc. or tmr or mram or magnetic		
		adj memory or magnetic adj random adj		
		access adj memory or TJM or macro adj		
		magnetoresist\$5 or macromagnetoresist\$5)		
		and ((seed or buffer or underlayer or under		
		adj layer or seedlayer) near4 free)		



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L	Hits	Search Text	DB	Time stamp	
Number					
1	12516	(mr or mre or magneto adj resist\$5 or	USPAT;	2003/05/21	
		magnetoresist\$5 or amr or magnetic\$4 adj	US-PGPUB	14:44	
		resist\$5 or gmr\$1 or spin adj valve\$1 or			
		svmr\$1 or tjmr\$1 or tmj\$1 or tmr or mram			
		or magnetic adj memory or magnetic adj			
		random adj access adj memory or DSV or			
.		TJM or macro adj magnetoresist\$5 or			
		macromagnetoresist\$5).ti,ab,clm. or			
		"360/113" or 360/313-327.33.ccls. or			
		428/692-693.ccls. or 338/32\$2.ccls. or			
		324/207.21.ccls. or 324/252.ccls. or			
-		365/171.ccls. or 365/173.ccls. and (tunnel\$3			
		or cpp or c-p-p or c adj p adj p or current			
		near3 perpendicular\$2).ti,ab,clm.			
2	442	(mr or mre or magneto adj resist\$5 or	USPAT;	2003/05/21	
ł		magnetoresist\$5 or amr or magnetic\$4 adj	US-PGPUB	14:45	
		resist\$5 or gmr\$1 or spin adj valve\$1 or			
]		svmr\$1 or tjmr\$1 or tmj\$1 or tmr or mram			
		or magnetic adj memory or magnetic adj			
		random adj access adj memory or DSV or			
		TJM or macro adj magnetoresist\$5 or			
		macromagnetoresist\$5).ti,ab,clm. and			
		("360/113" or 360/313-327.33.ccls. or			
		428/692-693.ccls. or 338/32\$2.ccls. or			
		324/207.21.ccls. or 324/252.ccls. or			
		365/171.ccls. or 365/173.ccls.) and			
		(tunnel\$3 or cpp or c-p-p or c adj p adj p or			
		current near3 perpendicular\$2).ti,ab,clm.			
3	128547	(seed or seedlayer or underlayer or under	USPAT:	2003/05/21	
		adj layer or buffer or bias\$3 or barkhausen	US-PGPUB	14:51	
		or mdc or magnetic adj2 domain\$1 or			
		magnetization or magnet or magnets or			
		barkhaussen).ti.ab.			



4	188	((mr or mre or magneto adj resist\$5 or	USPAT;	2003/05/21
		magnetoresist\$5 or amr or magnetic\$4 adj	US-PGPUB	14:51
		resist\$5 or gmr\$1 or spin adj valve\$1 or		
		svmr\$1 or tjmr\$1 or tmj\$1 or tmr or mram		
		or magnetic adj memory or magnetic adj		
		random adj access adj memory or DSV or		
		TJM or macro adj magnetoresist\$5 or		
		macromagnetoresist\$5).ti,ab,clm. and		
		("360/113" or 360/313-327.33.ccls. or		
		428/692-693.ccls. or 338/32\$2.ccls. or		
		324/207.21.ccls. or 324/252.ccls. or		
		365/171.ccls. or 365/173.ccls.) and		
		(tunnel\$3 or cpp or c-p-p or c adj p adj p or		
		current near3 perpendicular\$2).ti,ab,clm.)		
		and ((seed or seedlayer or underlayer or		
		under adj layer or buffer or bias\$3 or		
		barkhausen or mdc or magnetic adj2		
		domain\$1 or magnetization or magnet or		
		magnets or barkhaussen).ti,ab.)		